

CLAIMS

1. A display apparatus comprising:

storage means (168) for storing a control program having a plurality of
5 instructions and each symbol data for displaying a symbol related to each of said plurality of instructions;

control means (144) for controlling control target equipment electrically
connected to said display apparatus by executing each of said plurality of instructions;

display means (152) for displaying an image;

10 first display control means (132) based on the symbol data corresponding to the instruction executed by said control means for causing the symbol corresponding to said executed instruction to be displayed in a first display region in said display means;

video signal input means (112) for receiving an input of video data generated
based on a picked-up image of said control target equipment;

15 video data storing means (164) for storing said video data;

relation means (136) for relating the symbol data corresponding to the
instruction executed by said control means to the video data stored in said video data
storing means;

20 detection means (140) for detecting designation of the symbol displayed in said first display region; and

second display control means (132) responsive to detection of said designation
for causing a moving image to be displayed in a second display region in said display
means based on the video data related to the symbol data corresponding to the symbol
displayed in said first display region.

25 2. The display apparatus according to claim 1, further comprising timer means (132)
for measuring a time, wherein

said relation means relates the symbol data corresponding to the symbol

displayed in said first display region to the video data input through said video signal input means based on the time measured by said timer means.

3. The display apparatus according to claim 2, further comprising:

5 state signal input means (154) for receiving an input of a state signal indicating a state of said control target equipment;

log generation means (138) for generating log information representing history of an operation of said control target equipment based on said time and said state signal; and

10 log storing means (166) for storing said log information, wherein
said relation means relates the symbol data corresponding to the symbol displayed in said first display region to said log information.

4. The display apparatus according to claim 3, wherein

15 said state signal input means receives an input of a signal indicating an abnormality in said control target equipment,

said log generation means generates log information indicating an abnormality in said control target equipment when said signal indicating an abnormality is input,

20 said relation means relates a time at which said log information indicating an abnormality is generated to said log information indicating an abnormality for storage in said log storing means, and

25 said first display control means causes the symbol to be displayed in said first display region by making a difference between an output form of the symbol data for displaying the symbol corresponding said log information indicating an abnormality and an output form of the symbol data for displaying the symbol corresponding to a normal state in said control target equipment, so that a first display manner in said display means of the symbol corresponding to said log information indicating an abnormality differs from a second display manner in said display means of the symbol corresponding

to said normal state.

5. The display apparatus according to claim 4, wherein

said detection means detects designation of the symbol displayed in said first
5 display manner,

said display apparatus further comprising:

reading means (132) for reading time corresponding to said log information
indicating an abnormality from said log storing means based on detection of said
designation; and

10 reproduction means (132) for reading video data corresponding to a
predetermined period of time from said read time, wherein

said second display control means causes a moving image to be displayed in said
second display region based on the video data read by said reproduction means.

15 6. The display apparatus according to claim 4, wherein

said detection means detects designation of the symbol displayed in said first
display manner,

said display apparatus further comprising:

20 reading means (132) for reading time corresponding to said log information
indicating an abnormality from said log storing means based on detection of said
designation; and

reproduction means (132) for reading video data corresponding to a period of
time from predetermined time previous to said time to predetermined time subsequent to
said time, wherein

25 said second display control means causes a moving image to be displayed in said
second display region based on the video data read by said reproduction means.

7. The display apparatus according to claim 4, wherein

said first display control means controls said display means such that a plurality of symbols are displayed in said first display region in said first display manner,

said detection means detects designation of any symbol among said plurality of symbols, and

5 said second display control means includes

time data reading means for reading each time corresponding to each of said plurality of symbols from said log storing means,

video data reading means for reading video data corresponding to a predetermined period of time from said read each time for each of said plurality of symbols from said log storing means, and

10 reproduction control means for causing a moving image to be displayed in said second display region in time order or backward in time from said time corresponding to any symbol of which said designation is detected based on said read video data.

15 8. The display apparatus according to any of claims 5 to 7, wherein said display means displays said first display region and said second display region in the same screen.

9. The display apparatus according to claim 1, wherein

20 said video signal input means receives an input of each video data generated based on an image of said control target equipment picked up by each of a plurality of image picking-up means,

said relation means relates each symbol data corresponding to each of a plurality of instructions executed by said control means to said each video data, and

25 said second display control means causes each moving image to be displayed in said second display region based on said each video data.

10. A program product causing a computer to function as a display apparatus, said program product causing said computer to execute the steps of:

reading a control program having a plurality of instructions and each symbol data for displaying a symbol related to each of said plurality of instructions from storage means for storing data;

5 controlling control target equipment electrically connected to said computer by executing each of said plurality of instructions;

 based on the symbol data corresponding to the instruction executed at said controlling step, causing the symbol corresponding to said executed instruction to be displayed in a first display region in display means for displaying an image;

10 receiving an input of video data generated based on a picked-up image of said control target equipment;

 relating the symbol data corresponding to said executed instruction to said video data (S608);

 storing said video data in said storage means (S610);

15 detecting designation of the symbol displayed in said first display means (S802);
and

 in response to detection of said designation, causing a moving image to be displayed in a second display region in said display means based on the video data related to the symbol data corresponding to the symbol displayed in said first display region.

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11. A recording medium storing the program product according to claim 10.